

# MEMORANDUM

**TO:** Members, Clark Fork Basin Water Management Task Force (Task Force)  
**FROM:** Gerald Mueller  
**SUBJECT:** Summary of the November 3, 2008 Task Force Meeting  
**DATE:** November 8, 2008

## Participants

The following people participated in the Task Force meeting:

### *Task Force Members*

Ted Williams	Flathead Lakers
J. Gail Patton	Sanders County Commission
Nate Hall	Avista
Harvey Hackett	Bitterroot
Holly Franz	PPL Montana
Marc Spratt	Flathead Conservation District/Flathead Chamber of Commerce
Brianna Randall	Clark Fork Coalition
Fred Lurie	Blackfoot Challenge
Jim Dinsmore	Upper Clark Fork
Caryn Miske	Flathead Basin Commission
Steve Hughes	Flathead Irrigation Project Joint Board of Control

### *Ex Officio Members*

Senator Verdell Jackson	Senate District 5
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### *Public*

David Shively	University of Montana Department of Geography
Mark Reller	Bonneville Power Administration (BPA)
Clint Whitney	Flathead Basin Commission Chairman
Clayton Matt	Natural Resources Director, Confederated Salish and Kootenai Tribes (Tribes)

### *State and Federal Agency Personnel*

Tim Bryggman	Montana Department of Natural Resources and Conservation (DNRC)
Wendy Christensen	Bureau of Reclamation (BOR), Upper Columbia Area Office, Yakima, Washington
Leslie Stillwater	BOR, Pacific Northwest Regional Office, Boise, Idaho

### *Staff:*

Gerald Mueller	Consensus Associates
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## Meeting Agenda

- Updates
  - Task Force membership
  - FY2009 Conference Planning
  - Prior Appropriation paper printing
  - Hungry Horse water activities
- Hungry Horse Modeling

- Aquatic Invasive Species Legislation
- Public Comment
- Next Meeting

## Updates

Membership - Gerald Mueller stated that Brianna Randall and George Culpepper, Jr., have been appointed to the Task Force and DNRC Director Mary Sexton is considering appointing Bill Gardner of Liberty Drilling to represent well drillers.

DNRC Task Force Support - DNRC has recently filled the planning position that has provided staff support to the Task Force. Ann Schwend previously was the Watershed Coordinator for the Ruby Watershed Council. She begins her new position as a DNRC planner on November 17, 2008.

FY2009 Conference Planning - Gerald Mueller reported that he has begun contacting Clark Fork River basin watershed groups to determine their interest in participating in a round table meeting next May. He passed out copies of a table of potential invitees to the meeting. See Appendix 1 below. An invitation letter has been sent to all of the watershed groups on the list asking if they would be willing to participate. To date, the Lower Clark Fork Watershed Groups, the Rattlesnake Watershed Group, and the Watershed Restoration Coalition have responded indicating their willingness to do so.

Prior Appropriation Paper Printing - Mr. Mueller stated that he had recently asked DNRC's Martha Hodder, who is laying out the paper for printing, to make a change to footnote 9. This footnote addresses the Thompson Lumber Company water rights decision. Text was added to this footnote reflecting John Tubbs' June 9, 2008 memo clarifying that the portion of the basin above the northern boundary of the Confederated Salish and Kootenai Tribes' reservation remains open to new water rights. Ms. Hodder is revising the paper and will obtain cost estimates for printing it. The target for the availability and distribution of the paper is now November.

Hungry Horse Water Activities - Tim Bryggman stated that the state and the BOR have a memorandum of agreement specifying the scope of BOR's work for conducting activities to prepare and execute a contract for 100,000 acre-feet (100 KAF) of water stored in Hungry Horse for municipal, residential, and industrial (M&I) water uses. DNRC is working with the Denver and Boise offices of the Bureau of Reclamation to carry out the first step in the contracting process, a study that will relocate the costs of the Hungry Horse project to include M&I water uses. BOR economists in the Denver office will develop the cost reallocation which must then be approved by the Congress. DNRC hopes to meet with BOR in the next month to discuss the work plan for the Cost Reallocation Analysis.

Wendy Christensen, Technical Projects Officer, from BOR's Upper Columbia Area Office in Yakima, WA will be the program manager for BOR's response to the state's contract request and an activity manager from BOR will be assigned to oversee the day-to-day activities in December. She also stated that BOR needs information from the state about how the M&I use would occur so that it can conduct operational studies of the new uses as input to the cost reallocation study. In addition to the cost reallocation, BOR will be required to conduct an environmental impact study (EIS) to comply with the National Environmental Policy Act prior to issuing a contract. Ms. Christensen is developing a schedule for the contracting effort, and will provide it to the Task Force.

*Question - Will the cost reallocation study look at the Hungry Horse project costs that remain to be paid?*

Answer by Ms. Christensen - The cost reallocation will not look at the Hungry Horse project costs remaining to be repaid; instead, it will consider all project costs brought forward to today. I will provide additional information about how the reallocation study will be conducted. The Task Force can invite a BOR economist from Denver to a future meeting to discuss the reallocation study.

*Comment by Tim Bryggman - There are many uncertainties regarding the future M&I uses, including the role of ground water and where and when the water would be used. DNRC's request was for 100 KAF over a 50 year period.*

*Comment by Gerald Mueller - One way to bound the impacts of the state's request on Hungry Horse and Flathead Lake levels and river flows would be to assume that all of the new M&I use would be supplied by surface water released from Hungry Horse storage. Any use of ground water would likely reduce the impacts on lake levels and river flows.*

*Question - Has BOR set a date for a scoping analysis for the environmental impact study?*

Answer by Ms. Christensen - No, the EIS will come later in the contracting process. There is not a requirement to complete the EIS prior to completing the cost reallocation study.

*Comment by Mark Reller - BPA would like to be a part of the operational studies.*

*Question - Do we need to ask the 2009 legislature for additional funding beyond the \$260,000 for the cost reallocation study to ensure that the contracting process is not delayed?*

Answer by Tim Bryggman - DNRC did not include additional funds in its budget request and will not do so until we have certainty that the contracting process will proceed.

*Question - Won't the Tribes' requested use of Hungry Horse stored water have the same operational constraints as the state's M&I request?*

Answer - It is too early to say.

## **Hungry Horse Modeling**

Leslie Stillwater, Hydraulic Engineer with the BOR Pacific Northwest Region office, showed a power point presentation entitled "Hungry Horse / Flathead Operations and Storage Obligations Preliminary Modeling Studies." The studies addressed a possible request by the Tribes for a block of water from Hungry Horse of 229 KAF of which 128 KAF would be consumed by M&I and irrigation uses. The modeling studies have four purposes: supporting decision makers; investigating the effects of diverting Tribal water on the reservoirs and river reaches of the Hungry Horse and Flathead system; trying alternate operations for the delivery of Tribal water; and considering all water year types, including very wet to very dry years. The studies use Modsim river and reservoir simulation software calibrated to Riverware model output. They provide a daily time step simulation of water distribution, water rights and storage contracts from Hungry Horse reservoir to Albeni Falls. The studies used hydrologic data from water years 1929-2001. The modeling begins by removing the effects of human activities to determine unregulated flows. A calibration is then made using present day diversions and system operations. Ms. Stillwater noted that below Flathead Lake the existing gain and loss data lack good resolution.

Ms. Stillwater showed a schematic diagram of the model including the points of assumed flow gains, returns, and losses and reservoirs and minimum flow requirements. The modeling to date has

addressed two scenarios: the 2008 Federal Columbia River Power System Biological Opinion (FCRPS BiOp) addressing flow requirements for endangered fish species and the upper limit of Tribal depletions. For the latter scenario, the Tribes provided monthly values of the estimated upper limits of diversions at three locations, pumping from Flathead Lake, increased pumping from the Flathead River at the existing pumping plant, and pumping from Flathead River upstream from the mouth of Crow Creek. Ms. Stillwater then showed a number of curves summarizing the modeling results for the two scenarios including Hungry Horse reservoir and Flathead Lake elevations, river flows below Hungry Horse and Flathead Lake, and volume of flows at Albeni Falls.

*Question - Why do you use daily time steps?*

Answer - Using daily steps allows us better information about the high and low stream flows.

*Question - Does the model include the amount of storage on the Reservation other than Flathead Lake such as Nine Pipes reservoir? This additional storage could be used to hold water released from Hungry Horse during flood control operations and released later.*

Answer - Currently it does not.

*Comment by Clayton Matt - The additional storage will be addressed in other scenarios.*

*Question - How is FCRPS BiOp incorporated in the model?*

Answer - It is incorporated solely through operational constraints on Hungry Horse reservoir. There are no specific flow requirements at Albeni Falls. In 80% of the years, starting on July 8, Hungry Horse is drawn down linearly to elevation 3550 by the end of September (generally a 10 foot drawdown). In the 20% of the years representing the driest conditions, starting on July 8, Hungry Horse is drawn down linearly to elevation 3540 by the end of September (generally a 20 foot drawdown).

*Question - Is the Flathead Lake Drought Plan incorporated?*

Answer - The same drought plan for Flathead Lake as has been used in the VARQ studies is incorporated. At the present time, we can only guess at what the final drought plan might be. Flathead Lake is not drawn down as far if a very dry year is anticipated. When Flathead Lake stores augmentation flow from July 7 through August 31, it must release that same quantity of water during August 15-31. This additional requirement for is not part of the drought plan for Flathead Lake. It is based on informal discussions and operations which occurred in 2001. The 'rule' was included in these preliminary studies in an attempt to steward the augmentation releases to the mouth of the river in the same way that might be practiced in the field.

*Question - Does the state have oversight of this modeling?*

Answer - The state participates in the modeling analysis through the technical committee which includes representatives of the Tribes, DNRC, the Reserved Water Rights Compact Commission, and the federal agencies. Ethan Mace is DNRC's representative.

*Question - Does the modeling account for wells in deep aquifers that are not connected to surface water?*

Answer - No. We would like to account for ground water, but doing so will be complicated and would require data that may not be available.

*Comment - I have analyzed the flow data record for the Clark Fork River. It appears that over the last 20 years, river flow has increased by 5%. We do not appear to have the low flows that we used to have, perhaps because of Hungry Horse releases. I do not find that consumptive uses by people have decreased flows in the Clark Fork River at the bottom of the basin.*

Answer - We have done studies in other basins such as the Snake River in Idaho and the Deschutes River in Oregon which show flow changes. Flows in the Snake River appeared to increase during the 1970s but have decreased in more recent years due to changing irrigation practices and conservation measures. Deschutes flows have increased during some times of the year as a result of irrigation.

*Comment - We need to understand the impact of forest management on stream flow. Fires may result in more water in the streams.*

Response - We do not have the capability to make this assessment. We are developing the ability to assess the impacts of climate change on temperature and precipitation which will allow us to adjust the rainfall and runoff modules of our computer models.

*Comment - The Task Force proposed that the state contract with the BOR for Hungry Horse stored water for two purposes. One would be to mitigate the affect that new consumptive water uses in the basin would have on the lower basin hydropower water rights. The other is to obviate the need for the lower basin hydropower utilities to make call on junior water rights holders.*

*Question - Is it correct that to conduct the operational studies for the cost reallocation analysis the BOR needs a monthly distribution of discharges from Hungry Horse for M&I?*

Answer - Yes. We can work with the state to develop this information assuming the new uses are provided only by surface water releases from Hungry Horse.

## **Aquatic Invasive Species Legislation**

Clint Whitney, Chairman of the Flathead Basin Commission, discussed the threat posed by invasive species and particularly the quagga and zebra mussels. Because of their explosive growth they present a significant threat to our fishery, public water intakes, and other water uses involving pipes or other smooth surfaces to which the mussels attach. At present, these mussels have no predators or other means of mitigation. Neither mussel has been found alive in Montana to date, but dead mussels have been found on trailored boats in our state. Senator Jackson has agreed to sponsor legislation to address the threat of invasive species with the least constraints on private actions. The legislation will establish an advisory committee charged with developing a plan to address invasive species and a special fund to implement it. Mr. Whitney showed a DVD about the quagga and zebra mussels made by the Pacific States Marine Fisheries Commission entitled "Don't Move a Mussel".

*Question - Is enough weight being given to research on the mussels?*

Answer - The Pacific States Marine Fisheries Commission is conducting research. I recently heard about bacteria that may kill the mussels.

*Comment by Leslie Stillwater - The BOR has designated the quagga mussel as its top research priority.*

*Question - Will the legislation authorize quarantining boats that a found to be carrying these mussels?*

Answer - Yes.

## **Public Comment**

There was no additional public comment.

## **Next Meeting**

The next meeting is scheduled for 9:30 a.m. on Monday, December 8, 2008 at a location in Missoula to be announced. Tentative topics for this agenda include:

- Review of the available draft water bills for the 2009 legislative session;
- Discussion of the BOR schedule for the state contract for Hungry Horse;
- Discussion of the BOR methodology for the cost reallocation study for the state Hungry Horse contract;
- Discussion of the proposed methodology for sharing water shortages that is under development for the Confederated Salish and Kootenai Tribes water right compact.